

What is claimed is:

1. A bolt retention assembly comprising:
  - a first component defining a hole, said hole having a threaded bore defining a bore diameter and a counter-bore defining a counter-bore diameter greater than said bore diameter,  
5 said threaded bore and said counter-bore defining a relief therebetween; and
  - a bolt having a shank portion and a threaded portion extending through said first component, said threaded portion threadingly engageable with said threaded bore and abutable with said relief preventing said bolt from being removed from said hole after said  
10 threaded portion is rotatably threaded past said threaded bore.
2. A bolt retention assembly as set forth in claim 1 wherein said bolt further includes a head formed on said shank portion opposite said threaded portion for preventing said bolt from passing completely through said hole after said threaded portion is rotatably threaded  
15 past said threaded bore.
3. A bolt retention assembly as set forth in claim 2 wherein said shank portion defines an outer shank diameter and said bore diameter is greater than said outer shank diameter to allow said shank portion to slide therethrough between said head and said  
20 threaded portion.
4. A bolt retention assembly as set forth in claim 3 wherein said threaded portion defines a minor outer diameter and an outer thread diameter greater than said minor outer diameter and said shank diameter, and said counter bore diameter is greater than said outer  
25 thread diameter to allow said threaded portion to move axially through said counter-bore.
5. A bolt retention assembly as set forth in claim 4 wherein said first component is a coolant pump for assembly to an engine.
- 30 6. A bolt retention assembly as set forth in claim 5 wherein said coolant pump includes a housing having a plurality of bosses defining through holes extending axially between first and second ends.

7. A bolt retention assembly as set forth in claim 6 wherein said through hole includes said threaded bore for threadingly engaging with said threaded portion of said bolt and said counter-bore extending from said threaded bore to said second end for freely receiving said threaded portion therethrough.

5

8. A bolt retention assembly as set forth in claim 7 further including a second component for mounting to said first component, said second component having a second hole axially aligned with said hole of said first component.

10 9. A bolt retention assembly as set forth in claim 8 wherein said second hole includes a threaded bore defining a second bore diameter and threadingly engageable with said threaded portion of said bolt to clamp said second component to said first component.

15 10. A bolt retention assembly as set forth in claim 9 wherein said second hole includes a counter-bore defining a second counter-bore diameter greater than said second bore diameter, said bore and counter-bore of said second component defining a relief therebetween.

20 11. A bolt retention assembly as set forth in claim 10 wherein said second component is a mounting portion of an engine and wherein said mounting portion includes a plurality of bosses having through-holes defined by said second bore and said second counter-bore.

25 12. A method of retaining a bolt having a threaded portion, a shank and a head to a first component having a hole extending therethrough from a first surface to a second surface wherein the hole defines a bore and a counter-bore coaxial therewith and defining a relief therebetween, the method comprising the step of rotatably driving the bolt through the bore such that the bolt is held loosely at the shank portion between the bore and counter-bore wherein the bolt is retained coaxially in one direction by engagement between the head and the first surface of the component and an opposite direction by engagement between the  
30 threaded portion and the relief.